

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/EP2004/008577

International filing date (day/month/year)
30.07.2004

Priority date (day/month/year)
08.08.2003

International Patent Classification (IPC) or both national classification and IPC
A61K47/38

Applicant
MIPHARM S.P.A.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/EP2004/008577

10/567890

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/008577

Box No. II Priority

1. ☒ The following document has not been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3,4
	No: Claims	1,2,5,6
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43*bis*.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43*bis*.1 and 70.9)

see form 210

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document/s/:

- D1: WO 03/094920 A (DE BETHUNE MARIE-PIERRE T M M ; STOFFELS PAUL (BE); VAN ROEY JENS MARC) 20 November 2003 (2003-11-20)
- D2: WO 01/28515 A (GIZURARSON SVEINBJORN ; SKULASON SKULI (IS); HOLBROOK W PETER (IS); KR) 26 April 2001 (2001-04-26)
- D3: JONES DAVID S ET AL: "Textural, viscoelastic and mucoadhesive properties of pharmaceutical gels composed of cellulose polymers" INTERNATIONAL JOURNAL OF PHARMACEUTICS (AMSTERDAM), vol. 151, no. 2, 1997, pages 223-233, XP002311525
- D4: CARLAN S J ET AL: "Extemporaneous preparation of misoprostol gel for cervical ripening: A randomized trial" OBSTETRICS AND GYNECOLOGY, vol. 90, no. 6, December 1997 (1997-12), pages 911-915, XP002311526
- D5: SYED TANWEER A ET AL: "Management of intravaginal warts in women with 5-fluorouracil (1%) in vaginal hydrophilic gel: A placebo-controlled double-blind study" INTERNATIONAL JOURNAL OF STD AND AIDS, vol. 11, no. 6, June 2000 (2000-06), pages 371-374, XP009041891
- D6: BIRNIE CHRISTINE R ET AL: "Antimicrobial and diffusional correlation of N-alkyl betaines and N-alkyl-N,N-dimethylamine oxides from semisolids" JOURNAL OF PHARMACEUTICAL SCIENCES, vol. 90, no. 9, September 2001 (2001-09), pages 1386-1394, XP002311527
- D7: BALLAGH S A ET AL: "Safety of single daily use for one week of C31G HEC gel in women." CONTRACEPTION, vol. 66, no. 5, November 2002 (2002-11), pages 369-375, XP002311528

- 2. The subject-matter of independent claim 1 is not novel (Art. 33(2) PCT) in view of prior art disclosures which can be taken e.g. from D4-D7. Said prior art documents (cf. passages cited in the ISR) disclose hydroxyethylcellulose gel compositions which fall within the definition of the above mentioned claim.
- 3. The dependent claims 2-6 do not appear to contain any additional features which,

in combination with the features of any claim to which they refer, would render the claimed subject-matter novel and/or inventive (Art.33(2)-(3) PCT).

- 3.1 The specific embodiments are disclosed or at least suggested by the state of the art disclosed in D2-D7 (cf. passages cited in the ISR), e.g. the intravaginal application of hydrogels based on hydroxyethylcellulose as the only gelling and bioadhesive agent is generally known from e.g. D4, D5 and D7. Furthermore, D2 and D6 suggest vaginal application of a hydroxyethylcellulose gel. Also the delivery of active agents by a mucoadhesive gel based on hydroxyethylcellulose has been disclosed and/or suggested in the state of the art, e.g. D2-D7, and the claimed excipients relate to commonly used additives in hydrogel preparations for mucosal application. At least they do not appear to bring a solution to any specific problem, as compared to the state of the art, which solution would involve an inventive step.
4. The subject-matter of claims 1-6 is considered to be industrially applicable and accordingly meets the requirements of Art.33(4) PCT.

Re Item VI

Certain documents cited

Document D1, published after the effective date of filing of the present application, contains subject-matter (cf. passages cited in the ISR) which is considered relevant to the present application (Rule 70.10 PCT).